AS-

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,515	11/12/2003	Fei Luo	BEAS-1339US2	7689

23910   7590   01/26/2005

FLIESLER MEYER, LLP
FOUR EMBARCADERO CENTER
SUITE 400
SAN FRANCISCO, CA 94111

EXAMINER
ZHEN, LI B

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/706,515	LUO ET AL.
	Examiner	Art Unit	
	Li B. Zhen	2126	

-- Th MAILING DATE of this communication appears on the cover sheet with th correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 November 2004</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 – 20 are pending in the application.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3.   Claims 17 – 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant recites the limitation "enables the vendor object to be processed in a different manner as compared with non-vendor objects" in claims 17 – 20 [lines 2 – 3 of claims 17 and 18 and lines 9 – 11 of claims 19 and 20, and "receiving a vendor object and superclass and non-vendor object" in claim 19, line 3. After carefully reviewing the specification, examiner was unable to locate any reference to "non-vendor objects". It may be reasonable to suggest that "non-vendor objects" exist. However, the specification does not disclose or suggest computer code capable of receiving a non-vendor object. The specification discloses specific treatment of vendor objects but it does not disclose or suggest treating non-vendor objects in a different manner as vendor objects because the specification never refers to non-vendor objects. There

does not appear to be a written description of the claimed limitation in the application as

filed.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5.   **Claims 1 – 8 and 10 – 20 are rejected under 35 U.S.C. 102(b) as being**

anticipated by "From Dalang to Kava – the Evolution of a Reflective Java

Extension" to Welch et al. [hereinafter Welch].

6.   As to claim 1, Welch teaches a computer program product for execution by a

server computer [web server; p. 18, 1st paragraph] for dynamically generating a wrapper

object [Wrapper MetaObject; Section 3.1, p. 5], comprising:

computer code for receiving a vendor object [COTS applications that are built

from dynamically loaded components, Section 8, p. 18; see also Abstract and

Introduction; examiner notes the COTS software components are Commercial Off-the-

Shelf software objects, therefore it would read on vendor objects; also referred to as

Base Object] and superclass [p. 6, 2nd paragraph; Inheritance, p. 18];

computer code for performing reflection on the vendor class [At load time Dalang uses the Java Core Reflection API (JCR) in order to discover the public interface of the Base Object; p. 6, 1st paragraph];

computer code for generating a wrapper class [It then generates source code for the Wrapper MetaObject which is dynamically compiled; p. 6, 1st paragraph];

computer code for instantiating the wrapper class, the instantiating including generating a wrapper object as an instance of the wrapper class [Wrapper MetaObject which is dynamically compiled; p. 6, 1st paragraph]; and

computer code for associating the vendor object with the wrapper object [generated Wrapper MetaObject is then switched for the BaseObject through class renaming at the byte code level, p. 6, 1st paragraph; p. 15, 1st paragraph], thereby enabling specific treatment of vendor objects [reflective extension for Java that is intended to be used to adapt the runtime behaviour of COTS components, p. 19, Section 9; implement behavioural adaptations; p. 18, Section 8]

7.   As to claim 2, Welch teaches the wrapper object is dynamically generated at runtime [p. 6, 1st paragraph].

8.   As to claim 3, Welch teaches the superclass is one of a pre-existing JDBC, JMS, or connector class [MetaObject; p. 5, Section 3.1].

9.   As to claim 4, Welch, teaches the superclass includes logic to handle server side

tasks [this abstract class takes the responsibility of defining the binding between a

specific Wrapper MetaObject and the BaseObject; p. 5, Section 3.1].

10.   As to claim 5, Welch teaches the wrapper class is generated in bytecode [p. 6, 1st

paragraph].

11.   As to claim 6, Welch teaches bytecode is generated for vendor methods not

implemented in the superclass [p. 19, Section 9; implement behavioural adaptations; p.

18, Section 8; p. 17, 2nd paragraph].

12.   As to claim 7, Welch teaches the bytecode is generated using hot code

generation [Wrapper MetaObject which is dynamically compiled; p. 6, 1st paragraph].

13.   As to claim 8, Welch teaches providing the wrapper object to an application

program, comprises providing the application program to access standard features and

non-standard vendor extensions [metaobjects can encapsulate the behavioural

adaptations necessary to satisfy desirable non-functional requirements such as fault

tolerance or application level security; p. 1, Introduction].

14.   As to claim 10, Welch teaches a computer program product for execution by a

server computer for processing an invocation using a dynamically generated wrapper [It

then generates source code for the Wrapper MetaObject which is dynamically compiled;

p. 6, 1st paragraph], comprising:

computer code for receiving an invocation call by a wrapper object, the

invocation call directed to a wrapped vendor object by an application program [using

class wrappers to intercept method invocation, p. 1, Introduction; Wrapper MetaObject,

p. 5, Section 3.1];

computer code for initiating pre-processing by the wrapper object

[beforeReceiveMethod() is called with parameters representing the source, arguments,

and method; p. 14, 3rd paragraph; code segment on p. 16];

computer code for calling the wrapped vendor object by the wrapper object

[caption for Fig. 3, p. 8];

computer code for receiving a result from the wrapped vendor object by the

wrapper object [afterReceiveMethod() is called with a parameter representing the result

of the invocation; p. 14, 3rd paragraph; code segment on p. 16];

computer code for initiating post-processing by the wrapper object [exception

handling, p. 18]; and

computer code for provide the result to the application program [p. 14, 3rd

paragraph; caption for Fig. 3, p. 8], thereby enabling specific treatment of vendor

objects [reflective extension for Java that is intended to be used to adapt the runtime

behaviour of COTS components, p. 19, Section 9; implement behavioural adaptations;

p. 18, Section 8].

15.   As to claim 11, Welch teaches the pre-processing including calling a pre-invocation handler [beforeReceiveMethod() is called with parameters representing the source, arguments, and method; p. 14, 3rd paragraph; code segment on p. 16].

16.   As to claim 12, Welch teaches the pre-invocation handler is configured to execute server-side code [caption for Fig. 3, p. 8; p. 10, Section 5].

17.   As to claim 13, Welch teaches the server-side code includes global transaction processing code [distribution, atomicity and concurrency, p. 10, Section 5].

18.   As to claim 14, Welch teaches the post-processing including calling a post-invocation handler [afterReceiveMethod() is called with a parameter representing the result of the invocation; p. 14, 3rd paragraph; code segment on p. 16]

19.   As to claim 15, Welch teaches the post-invocation handler is configured to perform post-processing server side tasks [exception handling, p. 18; p. 10, Section 5].

20.   As to claim 16, Welch teaches the post-processing server-side tasks include global transaction management [distribution, atomicity and concurrency, p. 10, Section 5].

21.   As to claims 17 and 18, Welch teaches wherein associating the vendor object

with the wrapper object enables the vendor object to be processed in a different manner

as compared with non-vendor objects [reflective extension for Java that is intended to

be used to adapt the runtime behaviour of COTS components, p. 19, Section 9;

implement behavioural adaptations; p. 18, Section 8].

22.   As to claim 19, this is rejected for the same reasons as claims 1 and 17. As to

receiving a non-vendor object [also note the 35 USC 112 first paragraph rejection with

regards to this limitation], Welch teaches receiving non-vendor object [download

application code, metaobject code and the metaobject binding configuration; p. 18, 1st

paragraph].

23.   As to claim 20, this is rejected for the same reasons as claims 1 and 18 above.

Claim Rejections - 35 USC § 103

24.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

25.   **Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over**

Welch.

26.   As to claim 9, Welch teaches the standard Java Platform and distributed

computing but does not disclose J2EE. The earliest version of J2EE (v1.2.1) was

released in the May 2000, which is after the publication date of this article.

27.   However, it would have been obvious to a person of ordinary skilled in the art at

the time of the invention that Welch would use J2EE to take advantage of new features

provided by J2EE.

Response to Arguments

28.   In response to the Non-Final Office action dated 7/29/2004, applicant amended

claim 1, 8, 9 and 10 and added new claims 17 – 20. Claims 1 and 10 were amended to

include the new limitation "thereby enable specific treatment of vendor objects" and

claims 8 and 9 were amended to correct certain obvious typographical errors.

29.   Applicant submitted that Office Action's argument failed to consider the recited

claim 1 limitation regarding "vendor objects," which element is clearly defined in the

specification (paragraphs 0007 and 0008) [p. 10, lines 4 – 6]. Examiner respectfully

disagrees and notes that the specification does not provide a clear definition for "vendor

objects." For example, paragraph 0007 refers to third party vendors and vendor

resource adapters but does not mention vendor objects. Paragraph 0008 discloses

providing access to vendor objects but does not define vendor objects. Additionally,

examiner submits that paragraph 0007 and 0008 are located under the heading

"Background of the Invention." Therefore, the term "vendor object" is afforded its plain meaning and the examiner interpreted a vendor object as an object developed by a vendor. The cited prior art, Gutherie and Hightower, teaches objects developed by vendors.

Conclusion

30.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. The new limitation "thereby enable specific treatment of vendor objects" added to claims 1 and 10 and the addition of new claims 17 – 20 necessitated the new reference to Welch and the new 35 U.S.C. 112 first paragraph rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

31.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

"Using MetaObject Protocols to Adapt Third-Party Components" teaches using a metaobject protocol to add desirable properties to third-party downloadable Java components.

"A Reflective Java Class Loader" teaches the use of reflective class loader in Java to generate wrappers for third-party components dynamically.

32.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Li B. Zhen
Examiner
Art Unit 2126

lbz

MENG-AI T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100